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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,579	03/29/2004	Kimiyuki Hayasaki	00862.023530.	9512
5514	7590	09/14/2006	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			GOLDBERG, BRIAN J	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/810,579	Applicant(s) HAYASAKI, KIMIYUKI	
	Examiner Brian Goldberg	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/9/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 6 and 17 are objected to because of the following informalities:
The claimed subject matter is not supported by the specification or drawings.
The time-divisional drive control circuit is not described or shown to be located between extensions of adjacent ink supply channels. Appropriate correction is required.
2. Claims 9 and 20 are objected to because of the following informalities: In the last line of the claim, "provided on both one side and it opposite side of the printhead substrate" is not proper and it is not clear to what structure arrangement applicant is referring. Appropriate correction is required.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujii (US 6729708).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

2. Regarding claim 1, Fujii discloses "at least two printing element arrays (611 and 612 of Fig 6), each having a plurality of printing elements disposed in an area between at least two of the ink supply channels, alongside each of the ink supply channels (600 of Fig 6); a drive control circuit (613 and 614 of Fig 6), disposed outside the area, for controlling the driving of the at least two printing element arrays; and a shared wiring portion (605 and 606 of Fig 6), disposed in the area, for providing a signal making each of the printing elements of the at least two printing element arrays provided corresponding to the plurality of ink supply channels drivable (col 7 ln 41 – col 8 ln 7)." While the figure does not show more than one ink channel, Fujii discloses using multiple channels (col 12 ln 20) or an integrated printhead (col 13 ln 12-14). The ink supply opening 600 of figure 6 constitutes the claimed supply channel and as Fujii alludes to, in having multiple channels, the elements of figure 6 would simply be duplicated.

3. Regarding claim 2, Fujii discloses "a first printing element array (611 of Fig 6) and a second printing element array (612 of Fig 6) are disposed along both sides of each of the ink supply channels (600 of Fig 6)."

4. Regarding claim 3, Fujii discloses "a time-divisional drive control circuit (615-620, 623, 624 of Fig 6) that time-divisionally drives the printing elements included in the at least two printing element arrays via the drive control circuit, wherein the shared wiring portion (605, 606 of Fig 6) is a plurality of wires that

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transmit a control signal for specifying a sequence upon the time divisional driving (col 7 ln 41 – col 8 ln 7 and col 6 ln 32 – col 7 ln 14).”

5. Regarding claim 4, Fujii discloses “a decoder circuit (106 of Fig 3, 615, 616 of Fig 6) that generates a control signal for specifying a sequence upon the time divisional driving (col 6 ln 46-49).”

6. Regarding claim 5, Fujii discloses “the time-divisional drive control circuit is provided on a peripheral portion of the printhead substrate (see the bottom portion of Fig 6).”

7. Regarding claim 6, Fujii discloses “the time-divisional drive control circuit is disposed between an extension of one of the plurality of ink supply channels and an extension of its adjacent one of the plurality of ink supply channels (see Fig 6 615-620, 623, 624).”

8. Regarding claim 7, Fujii discloses “a shift register circuit (101, 104 of Fig 3, 619 and 620 of Fig 6) that inputs a print signal for driving the printing elements (col 6 ln 32-37); and a latch circuit (102, 105 of Fig 3, 617, 618 of Fig 6) that latches the print signal input to the shift register circuit (col 6 ln 37-42).”

9. Regarding claim 8, Fujii discloses “the shift register circuit (619, 620 of Fig 6) and the latch circuit (617, 618 of Fig 6) are provided on a peripheral portion of the printhead substrate (see bottom portion of Fig 6).”

10. Regarding claim 9, Fujii discloses “the time-divisional drive control circuit, the shift register circuit (619, 620 of Fig 6) and the latch circuit (617, 618 of Fig 6) are provided on both one side and its opposite side of the printhead substrate (see Fig 6 615-620, 623, 624).”

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11. Regarding claim 10, Fujii discloses "the shared wiring portion (605, 606 of Fig 6) is a matrix wiring capable of time-divisionally controlling sending an electric current so as to time-divisionally drive the printing elements (see Fig 6 and the wiring of Fig 3 that allows time-divisional driving, col 2 ln 45-46)."

12. Regarding claim 11, Fujii discloses "ink of different colors is supplied to each of the ink supply channels (col 13 ln 10-15)."

13. Regarding claims 12-22, Fujii discloses a printhead (IJH of Fig 1) containing the substrate disclosed above in claims 1-11, respectively.

14. Regarding claim 23, Fujii discloses "an ink tank (IT of Fig 1) integrated into the printhead (IJH of Fig 1) for supplying ink to each of the ink supply channels (600 of Fig 6)."

15. Regarding claim 24, Fujii discloses "a printing apparatus (IJRA of Fig 1) for printing by discharging ink onto a printing medium (P of Fig 1) using a printhead (IJH of Fig 1) according to claim 23."

16. Regarding claim 25, Fujii discloses "the apparatus according to claim 24, wherein the printhead (IJH of Fig 1) is exchangeable." While Fujii does not explicitly state that the printhead is exchangeable, it is well known in the art that such a printhead may be replaced.

17. Regarding claim 26, Fujii discloses "a printing apparatus (IJRA of Fig 1) for printing by discharging ink onto a printing medium (P of Fig 1) using a printhead (IJH of Fig 1) according to claim 12."

Response to Arguments

18. Applicant's arguments filed 6/26/06 have been fully considered but they are not persuasive. Applicant argues that Fujii does not provide a plurality of ink supply channels. However, as cited above, the ink supply opening 600 constitutes an ink supply channel and Fujii discloses using multiple ink supply channels in one alternative embodiment (which would be a duplication of the elements shown in figure 6 of Fujii). Contrary to applicant's argument, the term "ink supply channel" is not defined solely as the ink supply channels shown in figure 6 of the present application, but can also be defined as those disclosed by Fujii.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goldberg whose telephone number is 571-272-2728. The examiner can normally be reached on Monday through Friday, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on 571-272-2458. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian Goldberg
AU 2861
September 12, 2006



Vip Patel
Supervisory Examiner
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